Ipsi- versus contralateral patellar tendon graft in anterior cruciate ligament reconstruction: Short-term outcomes

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Introduction: To date, no study has characterised the progressive return to function from contralateral ACL reconstruction in the short-term postoperative period. We investigated differences in short-term outcomes following anterior cruciate ligament (ACL) reconstruction with contralateral and ipsilateral autogenous patellar tendon grafts.
Methods: Between 2006 and 2007, 108 consecutive patients underwent ACL reconstruction using either the contralateral ($n = 17$) or ipsilateral ($n = 91$) patellar tendon. Inclusion criteria were applied and eight patients from each treatment group were matched for age, gender and activity level. Outcome measures for quadriceps muscle strength, range of motion (ROM), objective stability and International Knee Documentation Committee (IKDC) subjective knee scores were evaluated.
Results: At 3 and 6 months after surgery, patients in the contralateral treatment group had greater mean quadriceps strength in both donor and reconstructed knees than in the reconstructed knee of the ipsilateral group. At 3 months after surgery 42.9% (3/7) in the contralateral treatment group achieved 85% of baseline (preoperative) quadriceps strength bilaterally versus 14.3% (1/7) in the ipsilateral group. The mean IKDC subjective knee score for the contralateral group was 70.6 at 3 months and 82.0 at 6 months versus 56.7 and 79.7, respectively for ipsilateral ACL reconstruction. Mean flexion at 3 months was 126.0° in the contralateral group and 115.0° in the ipsilateral group. Mean KT-1000 side-to-side differences in stability were similar in both treatment groups.
Discussion and conclusion: Contralateral ACL reconstruction appears to offer benefits in quadriceps strength recovery, ROM and IKDC subjective knee scores in the short-term follow-up period. It would appear that patients have a quicker return to function from contralateral patellar tendon graft with an easier early rehabilitation period.
Keywords: ACL; Patellar tendon

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Knee injuries in the floating knee

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Background: There is a high incidence of ipsilateral knee injuries with the floating knee, which makes these fractures even more challenging to manage. We present the impact knee injuries have on the final outcome of the floating knee. We propose a protocol for assessment and management of knee injuries with the floating knee.
Materials and methods: This prospective study included 29 patients with floating knee injuries. Knee injuries encountered were divided into bony, ligamentous and soft tissue. Bony injuries were assessed with radiographs and managed surgically along with the floating knee injury. Patients were assessed clinically for knee ligament injuries after fixation of the fractures intra-operatively and managed surgically. Soft tissue injuries around the knee were managed conservatively. Final outcome was assessed using the Karlstrom ament injuries, 1 posterior cruciate ligament injury, 1 medial meniscus injury and 3 extensive soft tissue injuries to the knee were encountered. The complications were knee stiffness and superficial infection. The end results according to the Karlstrom criteria were good, 6; acceptable, 1 and poor, 3.
Conclusion: The associated knee injuries in the floating knee are an important prognostic indicator. Soft tissue injury seems to have a very poor prognosis. We propose clinical evaluation of the knee after fixation of the fractures, surgical management of ligament and bony injuries and a proper rehabilitation programme to improve outcomes.
Keywords: Knee injuries; Floating knee

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The value of early MRI in acute knee injury: A randomised controlled trial

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Aim: To determine if early MRI diagnosis in the acutely injured knee affects management, use of resources and patient satisfaction compared to conventional management with physiotherapy.
Methods: Patients referred to fracture clinic with acute knee injury in whom a specific clinical diagnosis could not be made were randomised to one of two groups. The MRI group had a scan within 2 weeks and were then reassessed in clinic with management according to the results. The control group received physiotherapy and then reassessed. Patients were assessed in clinic on presentation, at 2 weeks and then by a telephone questionnaire at 3 months. Electronic medical records were also reviewed.
Results: 48 patients were recruited in total: 23 in the MRI group (78.2% male, 21.8% female) and 25 in the control group (68% male, 32% female). The mean age was similar in the two groups (29 years (range 18–61) vs. 30 years (18–50)). The MRI group had significantly less physiotherapy appointments (5 ± 3.42 vs. 2.52 ± 1.93, $p = 0.003$) on average until definitive treatment but similar outpatient appointments (2.72 ± 1.1 vs. 2.43 ± 0.66, $p = 0.27$). Median time to surgery was less in the MRI group (138 (31–199) vs.180 days (33–826)) but not statistically significant ($p = 0.19$). A similar number of patients returned to work in both groups (82.6% vs. 76%) but the MRI group had less time off work (15.82 ± 22.26 days vs. 20.56 ± 25.38 days, $p = 0.48$) and statistically better satisfaction scores (2 ± 2.68 vs. 3.5 ± 2.75, $p = 0.048$) than the control group.
Conclusion: We have shown that early MRI in acute knee injury can provide early diagnosis of internal derangement and therefore allow targeted treatment. These patients had significantly less physiotherapy appointments and less time off work which may offset the cost of the MRI. Moreover these patients were significantly more satisfied with the service.
Keywords: Acute knee injury; MRI; Physiotherapy; Randomised controlled trial

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